CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 91-163

WASTE DISCHARGE REQUIREMENTS FOR:

PORT OF OAKLAND
CARNATION TERMINAL DREDGE DISPOSAL SITE
OAKLAND, ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board), finds that:

1. The Port of Oakland (hereinafter called the discharger) has submitted a Report of Waste Discharge (ROWD), dated October 18, 1991, for the upland disposal of dredge materials to be removed from existing Berths 30 and 31. The Port has proposed the redevelopment of a 55 acre maritime site that includes the deepening of Berths 30 and 31, and the reconstruction of a 35.5 acre container terminal, called the Carnation Terminal. The ROWD outlines a workplan for drying the dredge materials from Berths 30 and 31, and describes the upland disposal of these materials during reconstruction of the container terminal, and at other upland sites owned by the Port.

2. The Carnation site is located at the entrance of the Port's Seventh Street Terminal Complex, Oakland Outer Harbor (Attachment A). The site is bounded by the Oakland Outer Harbor on the north, the Matson Terminal to the west, the Naval Supply Center and the Middle Harbor Basin to the south, and Berth 26 to the east. The site has been mostly vacant since the abandoned Carnation/Alber's Mill and former timber wharf were demolished. Maritime and industrial land uses occupy the surrounding sites.

3. A total of approximately 165,000 cubic yards of dredged sediments will be managed and dried at the Carnation Terminal site. Of this 165,000 cubic yards, approximately 20,000 cubic yards will be maintenance dredging material, and about 145,000 cubic yards will be removed during the deepening of the berths from -35 feet mean lower low water (MLLW) to -42 feet (MLLW). An additional 80,000 cubic yards to be removed during the maintenance dredging operation has already been approved for disposal at the Army Corps of Engineers designated Alcatraz Island disposal site (SF-11) under the Port's existing Corps maintenance dredging permit. The Board pursuant to Resolution 91-135 has recommended Water Quality Certification to the State Board Executive Director for this 80,000 cubic yards of material.

4. When the berths are deepened, the following volumes of materials are expected to be removed: 115,000 cubic yards of Merritt Sand, 10,000 cubic yards of Older Bay Mud, and 20,000 cubic yards of Miscellaneous Outboard fill. The Port has proposed using the Merritt Sand as foundation material during reconstruction operations. About 50,000 cubic yards will be used at the Carnation container terminal, and about 40,000 yards will be incorporated into the Berths 8 and 9 yard rehabilitation. The balance of the material will be either incorporated into small Port construction projects, land spread at the North Field of the Oakland Aiport, or appropriately disposed off-site.

5. The Port has completed an analysis of the sediments to be dredged from Berths 30 and 31. The analytical results from these tests, in conjunction with a health and environmental risk analysis performed by the Port, indicate that the material is suitable for the proposed upland disposal alternatives.

6. The sediment will be removed from the berths by a clamshell dredge and placed in a scow that will ferry the material close to the shore. The dredged materials will be unloaded via a clamshell bucket to a 180 by 1200 foot staging area before being transported by truck and/or conveyor to a 16 acre impoundment for drying. The purpose of the staging area is to facilitate the transfer of material across the site and not to serve as a settling basin. The volume of materials being transferred to shore will be a function of, and may be limited by, the space available in the staging area. The final design of the staging area will include a three foot perimeter containment structure, an earthen berm and/or a silt fence. The staging area will be sloped at 1% and will contain an intermediate berm/silt fence creating an area to serve as a collector trench for any decanted water. The collector trench will be sloped toward discharge points where the decanted water will pass through either a filter medium, rectangular weir structures or other comparable structures, so that discharge to the bay will meet the specified effluent water quality standards. The final design must be approved by this Board's Executive Officer prior to the placement of any dredge material.

7. The drying yard will be constructed on a 16 acre area located south of the current Seventh Street alignment and north of the proposed Seventh Street realignment. The drying area will be contained by either an earthen berm, a silt fence or combination of both. The discharge points will have to be equipped with either a double weir or the equivelant to assure compliance with effluent water quality standards.

8. Geotechnically suitable material will be separated at the drying yard for utilization during reconstruction of the Carnation Terminal, Berths 8 and 9 and smaller port projects. Materials utilized during reconstruction activities will be deposited at elevations above the groundwater table and encapsulated beneath a less permeable material. Materials not suitable for construction purposes will be transported to the North Field of Oakland Airport for land spreading. The material will be spread evenly over the site at a thickness of 1 - 3 feet to minimize sediment transport. No material will be spread closer than 50 feet to wetlands or locations within the Corps jurisdiction. The materials will be dry when transferred to the airport site. All storm runoff will enter the Airport's runoff control system, which is comprised of vegetated ditches that channel the runoff into settling ponds before it is pumped into the bay. The Port considers this site to be a temporary holding facility until the dredged materials can be used as fill material beneath a paved surface or off-hauled to a sanitary landfill. The Board's staff will be contacted prior to the relocation of any of this material.

9. The Carnation redevelopment project must also be permitted by the San Francisco Bay Conservation and Development Commission and the Army Corps of Engineers. Permit applications have been submitted to both of these agencies. There will be no loss of wetlands or open waters involved with any of the proposed upland disposal options.

10. In February 1986, the Board of Port Commissioners certified an environmental impact report (EIR) for the Carnation Redevelopment Project. A supplemental EIR was certified on March 8, 1991, which addressed the new regulatory criteria for dredging in San Francisco Bay as well as the proposed upland disposal alternatives.

11. The Regional Board is in the process of considering alternatives for the disposal of dredged material and finds that it is in the public interest to allow the use of the Carnation reconstruction site and the North Field of the Oakland Airport for the management of dredged materials, so long as this is done in a manner to minimize impacts on water quality and the loss of wetland habitat values.

12. The Regional Board adopted a revised Water Quality Plan for the San Francisco Bay Basin on December 17, 1986 and this Order implements the water quality objectives stated in that plan.

13. The beneficial uses of the central San Francisco Bay waters are as follows:

    a. Navigation
    b. Water contact recreation
    c. Non-water contact water recreation

d. Industrial process supply
e. Industrial service supply
f. Wildlife habitat
g. Fish spawning
h. Ocean commercial and sport fishing
i. Preservation of rare and endangered species
j. Fish migration
k. Shellfish harvesting
l. Estuarine habitat

14. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge, and has provided them with an opportunity to submit their written views and recommendations.

15. The Board in a public meeting heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Port of Oakland shall meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and shall also comply with the following:

A. EFFLUENT LIMITATIONS

The wastewater overflow as discharged to waters of the State from the drying facilities and the land disposal sites shall meet the following limits of quality at all times:

a. Settleable matter	1.0 ml/l-hr	maximum
b. pH	6.5-8.5	
c. Dissolved sulfide	0.1 mg/l	maximum
d. Copper	0.017 mg/l	maximum
e. Lead	0.050 mg/l	maximum
f. Mercury	0.021 mg/l	maximum
g. Zinc	0.840 mg/l	maximum

B. RECEIVING WATER LIMITATIONS

1. The dredging, treatment, and/or disposal of waste shall not create a nuisance as defined in Section 13050(m) of the California Water Code.

2. The dredging and/or disposal of waste shall not cause:

a. Floating, suspended, or deposited macroscopic particulate matter or foam in waters of the State at any place more than 100 feet from the dredge or point of discharge of the return flow.

b. Bottom deposits or aquatic growth in waters of the State at any place.

c. Alteration of apparent color beyond present natural background levels in waters of the State at any place more than 100 feet from the dredge or point of discharge of the return flow.

d. Visible floating, suspended, or deposited oil or other products of petroleum origin in waters of the State at any place.

e. Waters of the State to exceed the following quality limits at any point:

Dissolved Oxygen	5.0 mg/l minimum. When natural factors cause lesser concentrations then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
Dissolved Sulfide	0.1 mg/l maximum
pH	A variation from natural ambient pH by more than 0.2 pH units.
Toxic or other deleterious substances	None shall be present in concentrations or quantities which may cause deleterious effects on aquatic biota, wildlife or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.

3. The turbidity of the waters of the State at any point beyond 100 feet from the point of discharge of the return flow shall not increase above background levels by more than the following:

Receiving Water Background	Incremental Increase
<50 units	5 units, maximum
50-100 units	10 units, maximum
>100 units	10% of background, maximum

C. PROVISIONS

1. The discharge of silt, sand, soil, clay, or other earthen materials from dredging, construction, or any other onshore operation in quantities sufficient to cause deleterious bottom deposits or turbidity or discoloration in excess of natural background levels in surface waters is prohibited.

2. Dredging operations shall cease immediately whenever violations of requirements are detected by the Self Monitoring Program (SMP) and operations shall not resume until alternative methods of compliance are provided. The discharger shall notify the Regional Board immediately whenever violations are detected and operations shall not resume until the Executive Officer has approved the corrective action plan that will provide alternative methods of compliance.

3. The discharger shall file with the Regional Board monthly self-monitoring reports performed according to any Self Monitoring Program issued by the Executive Officer.

4. All reports pursuant to these Provisions shall be prepared under the supervision of a registered civil engineer or certified engineering geologist.

5. The dredge disposal site shall be designed, constructed and operated to prevent inundation, washout or erosion of wastes which could occur as a result of a 100 year 24 hour precipitation event or flood event.

6. The discharger shall ensure to the extent practicable that the foundation of the site, the levees surrounding the site, and the structures which control leachate, surface drainage, and erosion for this site are constructed and maintained to withstand conditions generated during the maximum probable earthquake.

7. The discharger shall install any and all leachate monitoring devices required to fulfill the terms of any Self-Monitoring Program issued to the discharger in order that the Board may evaluate compliance with the conditions of this Order.

8. The discharge of hazardous, designated, nonhazardous, and inert wastes, as defined in Title 23, Division 3, Chapter 15 of the California Administrative Code, to

the disposal site is prohibited. Only dredged material that has been demonstrated to be nonhazardous may be discharged to the disposal site.

9. The discharger shall remove and relocate any wastes which are discharged at this site in violation of these requirements.

10. The discharger shall file with this Board a report of any material change or proposed change in the character, location, or quantity of this waste discharge. For the purpose of these requirements, this includes any proposed change in the boundaries of the disposal areas or the ownership of the site.

11. The discharger shall maintain a copy of this Order at the site so as to be available at all time to site operating personnel.

12. This Board considers the property owner and site operator to have continuing responsibility for correcting any problems which arise in the future as a result of this waste discharge or related operations.

13. The discharger shall maintain all devices or designed features installed in accordance with this Order such that they continue to operate as intended without interruption except as a result of failures which could not have been reasonably foreseen or prevented by the discharger.

14. The ultimate offsite disposal of the dried dredged material is subject to the approval of the Executive Officer. This approval shall be based upon a demonstration that the ultimate disposal will occur at a site that has Waste Discharge Requirements (WDR) from this Regional Board or a site that has received a waiver of WDR.

15. The discharger shall submit, by May 15, 1992, a detailed design and operations workplan, acceptable to the Executive Officer, for the containment and management of dredged materials in the staging and drying areas. This report shall contain detailed drawings of all effluent treatment devices and design features, and contain maps which clearly identify the locations of all points of effluent discharge.

16. Prior to the discharge of any dredge materials to the Carnation Terminal site, the discharger shall submit "As Built Construction Reports", acceptable to the Executive Officer, for both the staging and drying area facilities.

17. The discharger shall submit "As Built Construction Reports", acceptable to the Executive Officer, within 45 days of completion of all projects which incorporate any dredged materials managed at the Carnation Terminal site.

18. The discharger shall permit the Regional Board or its authorized representative, upon presentation of credentials:

    a. Entry upon the premises on which wastes are located or in which any required records are kept.

    b. Access to copy any records required to be kept under the terms and conditions of this Order.

    c. Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this Order.

    d. Sampling of any discharge or groundwater covered by this Order.

19. These requirements do not authorize commission of any act causing injury to the property of another or of the public; do not convey any property rights; do not remove liability under federal, state or local laws; and do not authorize the discharge of wastes without appropriate permits from other agencies or organizisions.

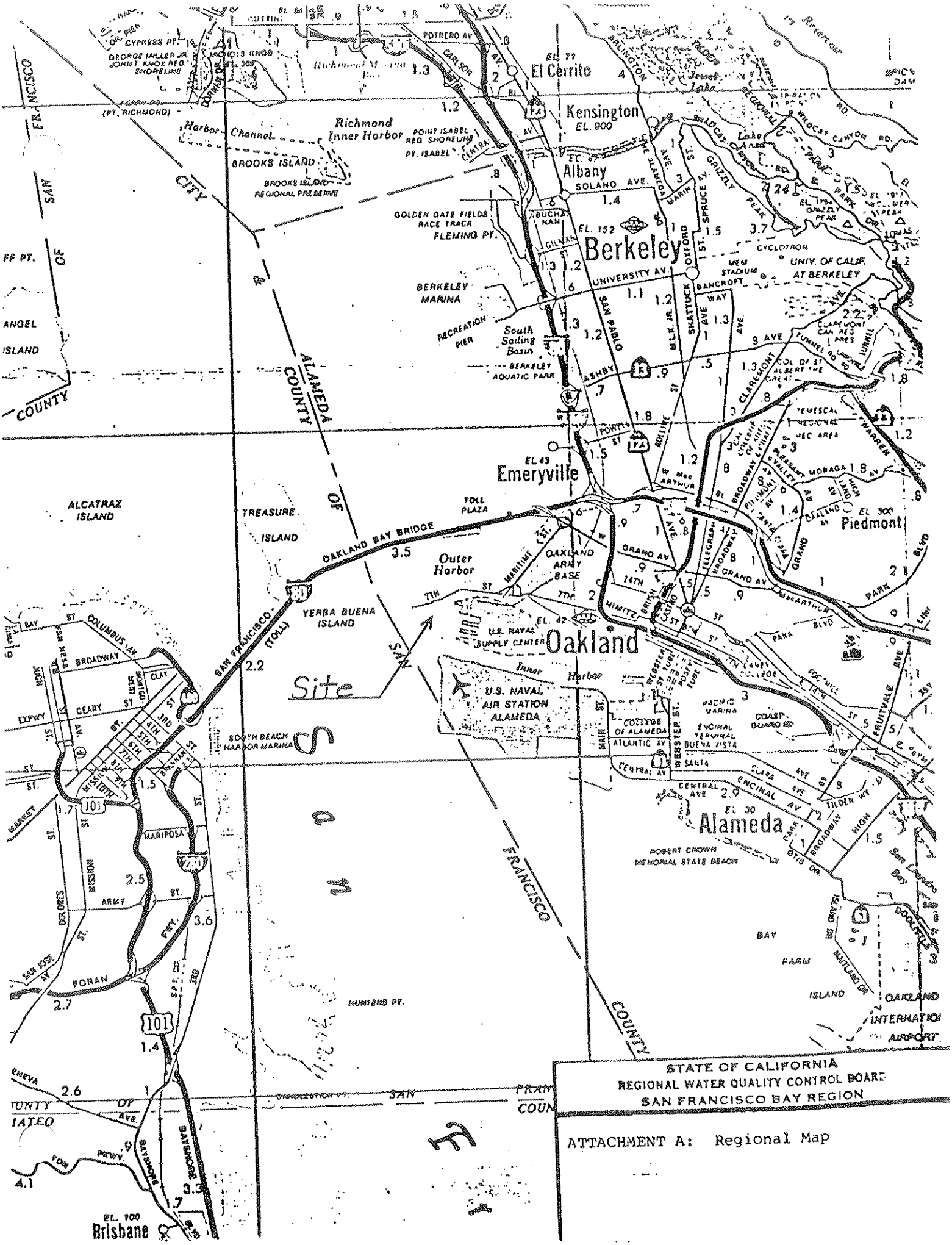
I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on November 20, 1991.

Steven R. Ritchie

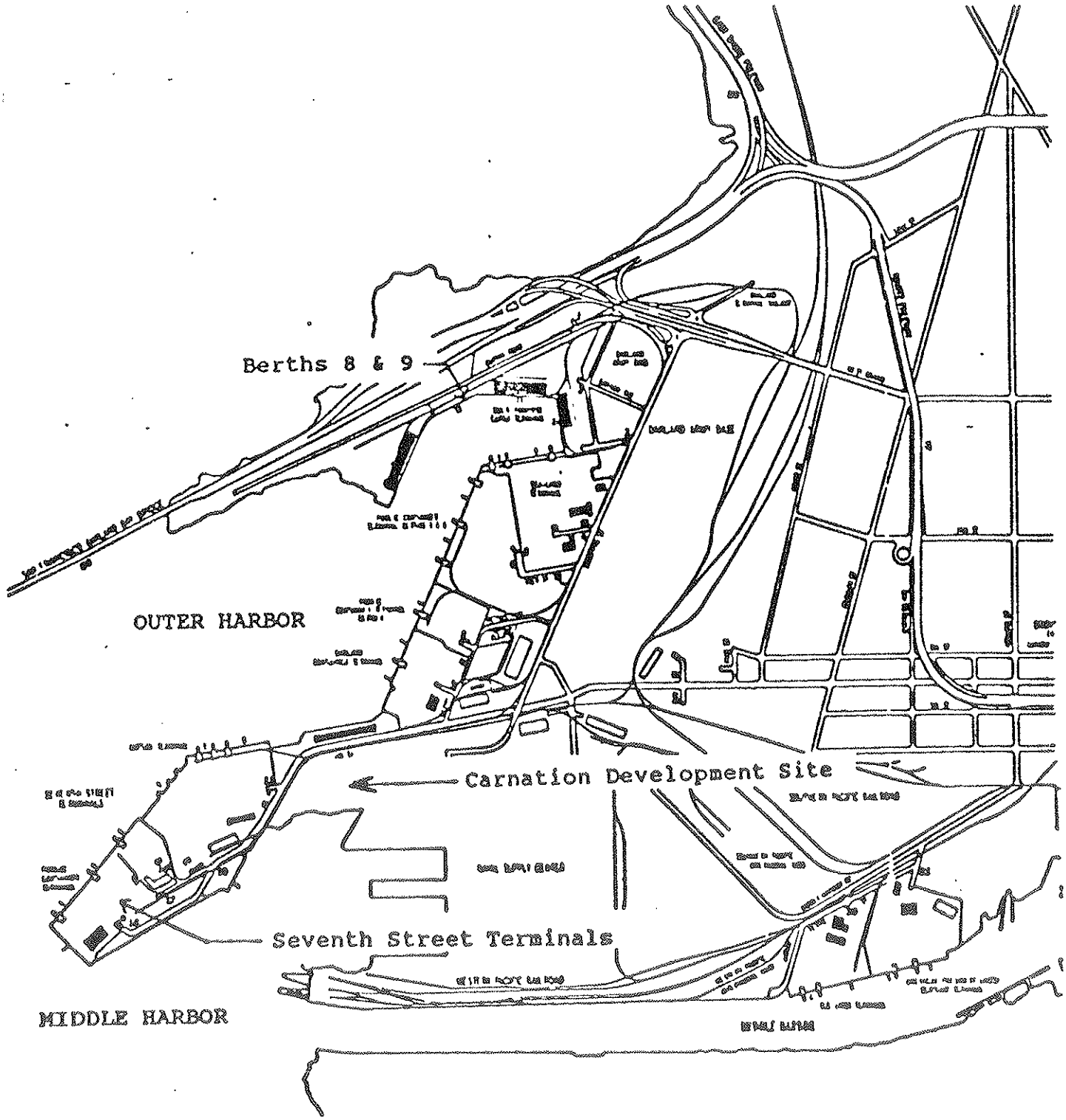
Executive Officer

Attachments: A) Regional Map
B) Carnation Terminal Site Map
C) Oakland Airport North Field Site Map
D) Self Monitoring Program

ATTACHMENT A



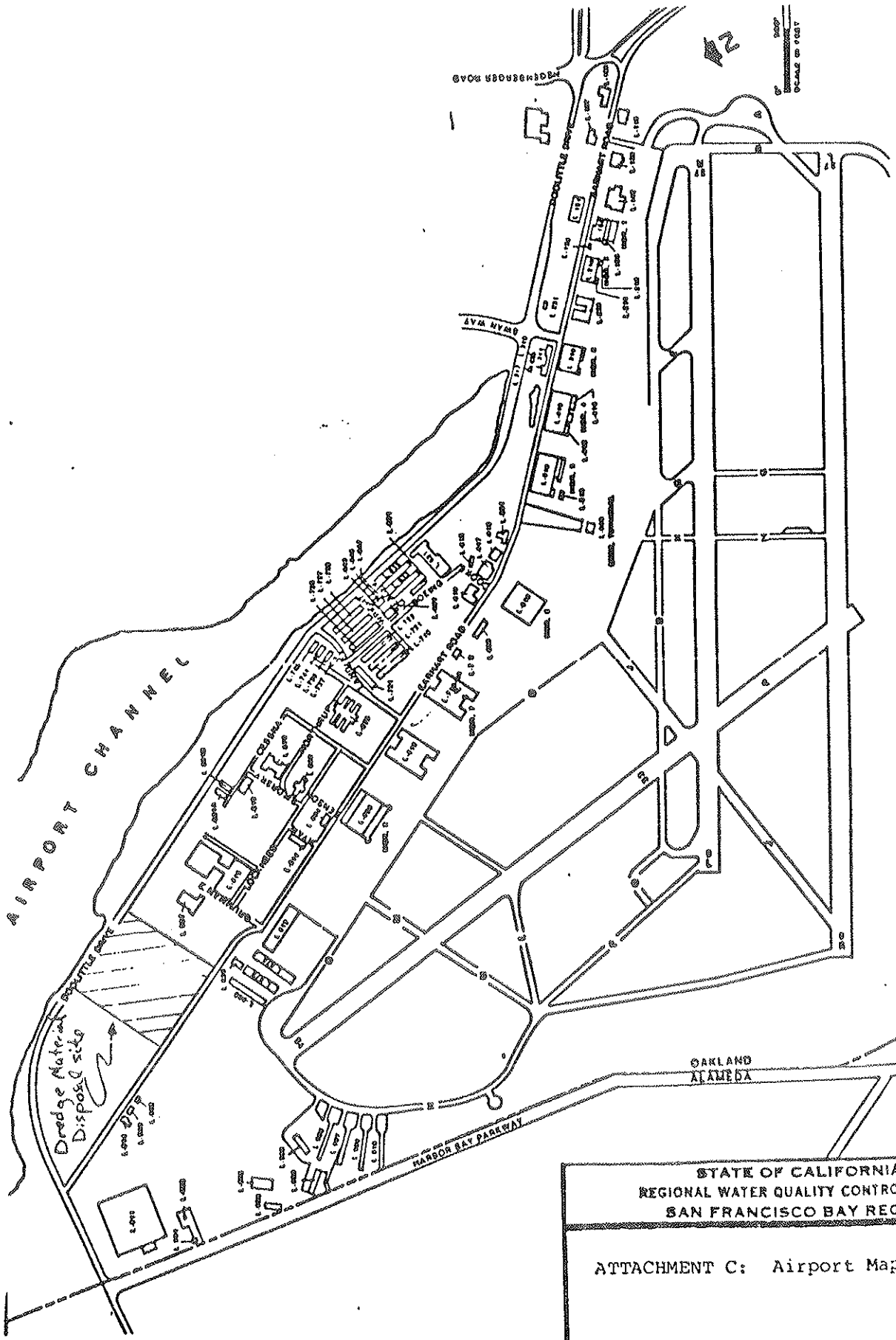
ATTACHMENT A: Regional Map



STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ATTACHMENT B: Carnation Site

DRAWN BY:	DATE: 10/25/01	DRWG NO. 2



STATE OF CALIFORNIA
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SAN FRANCISCO BAY REGION

ATTACHMENT C: Airport Map

DRAWN BY: WSA | DATE: 10/23/91 | DRWG NO. 3

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

PORT OF OAKLAND
CARNATION TERMINAL DREDGE DISPOSAL SITE

PART A

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No.73-16. This Self-Monitoring Program is issued in accordance with Section C.3 of Regional Board Order No. 91-163.

The principal purposes of a self-monitoring program by a waste discharger are: (1) to document compliance with waste discharge requirements and prohibitions established by the Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge, (3) to develop or assist in the development of effluent standards of performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage , and analyses shall be performed according to 40 CFR 136 or methods approved by the Executive Officer.

Water and waste analysis shall be performed by a laboratory approved for these analyses by the State Department of Toxic Substance Control. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. DEFINITION OF TERMS

1. A grab sample is a discrete sample collected at any time.

2. Receiving waters(s) refers to any water which actually or potentially receives surface or groundwaters which pass over, through, or under waste materials or contaminated soils. In this case the groundwater beneath and adjacent to the dredge disposal site, the surrounding surface drainage ditches, and San Francisco Bay are considered the receiving waters.

3. Standard observations refer to:

   a. Receiving Waters

      1) Discoloration and turbidity: description of color, source, and size of affected area.

      2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.

      3) Evidence of beneficial use: presence of water associated wildlife.

      4) Flow rate.

      5) Weather conditions: wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation.

   b. Perimeter of the waste management unit.

      1) Evidence of liquid leaving or entering the waste management unit, estimated size of affected area and flow rate. (Show affected area on map)

      2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.

      3) Evidence of erosion.

4. Standard analysis and measurements refer to:

   a. pH
   b. Settleable Solids ml/l/hr
   c. Dissolved sulfide
   d. Total Suspended Solids
   e. Arsenic
   f. Total Chromium
   g. Copper

h. Cadmium
i. Nickel
j. Zinc
k. Lead
l. Mercury
m. Silver
n. Total Polynuclear Aromatic Hydrocarbons (PAHs)
o. Total Phenols

D. SCHEDULE OF SAMPLING, ANALYSIS, AND OBSERVATIONS

The discharger is required to perform sampling, analysis, and observations according to the schedule specified in Part B.

E. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the discharger, and shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board. Such records shall show the following for each sample:

1. Identity of sample and sample station number.

2. Date and time of sampling and the person performing the sampling.

3. Date and time that analyses are started and completed, and name of the personnel performing the analyses.

4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used. A reference to a specific section of a reference required in Part A Section B is satisfactory.

5. Calculation of results.

6. Results of analyses, and detection limits for each analyses.

F. REPORTS TO BE FILED WITH THE REGIONAL BOARD

1. Written self-monitoring reports shall be filed each month by the fifteenth day of the following month. In addition an annual report shall be filed as indicated in F.2 The reports shall be comprised of the following:

a. Letter of Transmittal

A letter transmitting the essential points in each self-monitoring report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the past month

and actions taken or planned for correcting the violations, such as operation modifications and/or facilities expansion. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred in the last quarter this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting reports shall be signed by the Environmental Manager or his duly authorized representative if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

b. A map or aerial photograph shall accompany each report showing observation and monitoring station locations.

c. Laboratory statements of results of analyses specified in Part B must be included in each report. The laboratory director shall sign the laboratory statement of analytical results.

d. The quantity of dredged material disposed of during the past month, and the locations of the disposal operations.

e. The quantity of dredged material disposed of during the past month and the locations of the disposal operations.

f. An evaluation of the effectiveness of the operations and management plan to maintain the quality of State waters.

2. By January 31 of each year the discharger shall submit an annual report to the Regional Board covering the previous calendar year. This report shall contain:

a. Tabular and graphical summaries of the monitoring data obtained during the previous year.

b. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements.

c. A map showing the area, if any, in which filling has been completed during the previous calendar year.

d. An evaluation of the projects effectiveness.

Part B

1. DESCRIPTION OF OBSERVATION STATIONS AND SCHEDULE OF OBSERVATIONS

A. Land Observations

STATION	DESCRIPTION	OBSERVATIONS	FREQUENCY
P-1 thru P-`n' (perimeter)	Located at equidistant intervals not exceeding 200 feet around the perimeter of each waste management unit.	Standard observations for the perimeter and receiving waters.	Weekly

A map showing perimeter compliance points (P stations) shall be submitted by the discharger in the monthly monitoring report.

B. Seepage Monitoring

STATION	DESCRIPTION	OBSERVATION	FREQUENCY
S-1 thru S-`n' (seepage)	At any point(s) at which seepage is found occurring from the waste management unit.	Standard observations for the perimeter, and standard analysis.	Daily until remedial action is taken and seepage ceases.

C. Effluent Monitoring

STATION	DESCRIPTION	OBSERVATION/ ANALYSIS	FREQUENCY
At each point of effluent discharge	Points of discharge from staging & drying areas. Composite sample of two grab samples collected at the beginning and the end of the day.	Standard analyses.*	Monthly*

*pH, Dissolved Sulfide, Settleable Solids & Total Suspended Solids, Lead, Mercury, Copper, and Zinc shall be monitored daily.

2. CONTINGENCY REPORTING

A report shall be made by telephone of any seepage from the disposal area immediately after it is discovered. A written report shall be filed with this Board within five days. This report shall contain the following information: 1) a map showing the location(s) of discharge, 2) approximate flow rate, 3) nature of effects; i.e. all pertinent observations and analyses, and 4) corrective measures underway or proposed.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 91-163.

2. Is effective on the date below.

3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer, or request from the discharger.

Steven R. Ritchie

Executive Officer

Date: 11/14/91